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ABSTRACT

A study investigated the effects of suggestopedic accelerative learning and teaching (SALT) on the spelling achievement, attitudes toward school, and memory skills of fourth-grade students. Subjects were 20 male and 28 female students from two self-contained classrooms at Kennedy Elementary School in Rexburg, Idaho. The control classroom and the experimental classroom were matched on age, gender, and previous spelling achievement as measured by the Iowa Tests of Basic Skills (ITBS). The control group received traditional spelling instruction over the 18-week period, while the experimental group received spelling instruction supplemented by the SALT techniques of mind calming exercises, dramatic presentations, use of classical and Baroque music, review presentations, and ungraded quizzes. Spelling achievement was measured through weekly spelling tests. Memory skills and attitudes toward school were measured by pre- and post-tests. Results indicated that: (1) the experimental group obtained significantly higher spelling scores than the control group; (2) the experimental group obtained higher, but not statistically significantly higher, attitude scores and memory skills scores than the control group; and (3) students, teacher, and parents made positive comments concerning the SALT techniques. Findings suggest that SALT is effective in elementary school spelling instruction. (One table of data is included; 19 references are attached.) (RS)

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SALT and Spelling Achievement

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SALT and Spelling Achievement

Suggestive accelerative learning and teaching (SALT) was developed by Georgi Lozanov in Bulgaria in the mid 1960s and brought to the United States in the mid 1970s (Schuster, 1986). Lozanov (1989) began his research in suggestology specifically as a psychological experiment designed to increase memory capacities in the educational process (Lozanov, 1989; Lozanov & Gateva, 1981). This suggestology research focused on the possibilities of tapping into the human's reserve capacities through the constant connection of "paraconsciousness" with consciousness (Lozanov & Gateva, 1981).

Lozanov's approach was unique in that he taught his students to clear all thoughts out of their minds before instruction was begun. In his method, Lozanov recognized the potential of the unconscious processes in humans and used these unconscious processes to increase recall of old information in the learning of new (cited in Moon, 1988. Moon (1988) also reported that the Lozanov method required that an indirect suggestive atmosphere conducive to learning be established which supposedly would produce a holistic balance of mind and body and conscious/unconscious.

Lozanov (1989) believes that the theories basic to accelerative learning include the following: (1) using suggestion as an instructional tool; (2) the use of music as an integral part of instruction; and (3) whole brain learning. According to

Lozanov (1989), verbally-made positive suggestions are necessary to communicate expectations to students. Music is prescribed for use with all elements of suggestopedic instruction. Music is differentiated as to inclusion with the various elements of suggestopedy. Furthermore, Lozanov (1989) maintained that using the suggestive-accelerative approach to learning invokes the use of the whole brain in learning. His theory is that if the whole brain can be involved in the learning process; through music, relaxation (mind calming), and suggestion, learning occurs in geometric proportions (Gritton, 1989).

There are discrepancies among research findings in the United States as to the effectiveness of suggestive accelerative learning and teaching on learning retention. Some of the research findings suggest that there is a positive effect on learning and retention because of the use of suggestive-accelerative learning and teaching. For example, Stock and Daines (1989) found that accelerative learning "highlights the interactions of 'mind' and 'body' that seemed to lead to peak performance and accelerated learning" (p. 238).

The positive effects on learning and retention produced by suggestive-accelerative learning and teaching is further supported by the studies of M.S. Odendaal (1989), Y. Garcia (1988), C.E. Moon et al. (1988), B. Du Babcock (1988), E. Voci-Reed (1987), A. Prichard and J. Taylor (1974-1985), D. Schuster, A. Prichard and J. McCullough (1976-1978), and R.L. McGinty

(1987). Each of these studies showed significant gains from pretest to posttest for students taught using the suggestive-accelerative methodology or significant differences in posttest scores for students taught using suggestive-accelerative methods when compared to students taught with other techniques.

A number of studies, however, have yielded inconclusive results regarding the effects of suggestive-accelerative learning and teaching. For example, Portes and Foster (1989) found significantly positive effects for reading but only marginal differences were found for mathematics. In studies conducted by Anderson and Render (1987) and Schuster (1988), there were no significant differences found for the experimental groups being taught with suggestive-accelerative learning. In fact, Anderson and Render (1987) found that the control group scored significantly better than the experimental group. In another study, Schuster (1988) concluded that experienced instructors are necessary to achieve significant gains in achievement.

Purpose of Study

The purpose of the present study was to investigate the effects of suggestopedic accelerative learning and teaching (SALT) on the spelling achievement, attitudes toward school, and memory skills of fourth-grade students. Answers to the following questions were investigated:

1. Does suggestive accelerative learning and teaching have an effect on student spelling achievement?

2. Does suggestive accelerative learning and teaching have an effect on student attitudes toward school?

3. Does suggestive accelerative learning and teaching have an effect on memory skills?

Method

The subjects of the study were 48 fourth-grade students (20 males and 28 females) from two self-contained classrooms at Kennedy Elementary School in Rexburg, Idaho. The two classrooms which constituted the control and experimental groups were matched on age, gender, and previous spelling achievement as measured by the Iowa Tests of Basic Skills (ITBS) spelling subtest. The mean achievement spelling test scores were 4.42 for the control group and 4.35 for the experimental group. The mean age for both the control and the experimental groups was 9.0 years. Each of the groups contained 14 females and 10 males.

The study was conducted over 18 weeks during which time the control group received traditional spelling instruction using the Follett Spelling 4 text, while the experimental group received spelling instruction supplemented by SALT techniques. These techniques included mind calming exercises, dramatic presentations, use of classical and Baroque music, review presentations, and ungraded quizzes.

Spelling achievement was assessed through weekly written spelling tests from the Follett Spelling 4 text. Memory skills

were measured by pre- and post-tests adapted from Ebbinghaus' (1913) nonsense syllable test utilized in his classic information processing studies. In order to assess attitude, an attitude survey constructed by the principal investigator was administered to all students at the beginning and end of the 18-week study. Data collection also included the accumulation of qualitative data in the form of anecdotal records and interviews with students, parents, and teachers.

Data analysis consisted of three procedural steps. First, pre- and post-test difference scores for each student were computed for spelling achievement, memory skills, and attitudes toward school. Mean difference scores were then computed for the experimental and control groups on each outcome variable. Finally, the mean difference scores for the two groups relative to spelling achievement, memory skills, and attitudes were compared using *t*-tests.

Results

Mean scores on the three outcome measures (i.e., spelling achievement, memory, and attitudes) and *t*-test results are presented in Table 1. Results of the *t*-test comparing mean difference scores for the experimental and control groups on spelling achievement indicated a significant difference ($t = 2.90$, $p = .006$) with the experimental group obtaining significantly higher spelling scores following instruction incorporating SALT methods. Analysis of mean difference scores

Table 1
T-Test Results: Achievement, Attitude, and Memory

	X	sd	t	p
Achievement				
Pre-test				
Treatment	59.000	12.691	.54	.591
Control	56.4545	17.140		
Post-test				
Treatment	356.0455	6.680	2.90	.006
Control	329.2222	42.866		
Mean Difference				
Treatment	111.5000	59.053	1.13	.263
Control	94.1667	46.053		
Attitude				
Pre-test				
Treatment	70.5652	8.322	-1.30	.200
Control	73.5000	7.120		
Post-test				
Treatment	72.4348	8.145	-.90	9.29
Control	72.6250	6.140		
Mean Difference				
Treatment	1.8696	8.704	1.10	.277
Control	-.8750	8.379		
Memory				
Pre-test				
Treatment	1.7917	1.318	1.04	.304
Control	1.4167	1.176		
Post-test				
Treatment	3.7391	2.848	1.54	.130
Control	2.6250	2.060		
Mean Difference				
Treatment	1.9130	2.778	.97	.336
Control	1.2083	2.167		

on the attitude survey showed the scores to be higher for the experimental group, but the difference was not significant (t = 1.10, p = .277). In terms of memory skills, while the experimental group obtained a higher mean difference score, the score was not significantly greater than that of the control group (t = .97, p = .336).

Qualitative data collected from student comments indicated ease of learning, enjoyment of learning, and heightened self confidence. For example, comments such as: "This is really fun!", "Spelling was so fun today!", "Could we take our test early -- on Tuesday this week?", and "Why can't we have harder words?" were made often by the students in the experimental group.

Parent comments evidenced positive opinions concerning accelerative learning. Remarks were made about the children loving class, parents being delighted to have their children in the class, and parents being glad that this type of instruction was being used with their child.

Furthermore, teacher comments were highly positive in regard to student improvement. Throughout the study, the teacher of the other self-contained classroom made favorable comments about the differences between the treatment group students and the control group students. She observed that the treatment group students settled down and got ready to work more quickly after changing rooms than the control group students. She noted that the

treatment group students listened to directions, participated in discussions, took less time to do more work, and answered higher level questions than the students in the control group.

Conclusions and Implications

Data from the present study support the conclusion that accelerative learning and teaching techniques have facilitative effects on the spelling achievement of elementary school students. Furthermore, anecdotal record and interview data indicate that student motivation and interest were increased through the incorporation of SALT techniques in spelling instruction.

While these results suggest the effectiveness of SALT, the findings must be viewed with some caution because the personalities of the instructors teaching the experimental and control groups were disparate. The SALT class was taught with an emphasis on positive student self-esteem, a relaxed classroom atmosphere, enjoyable learning activities, student comfort, and student joy in meeting teacher expectations. Music was always present in the classroom. There was no homework in the SALT class. The control class was quite the opposite. Emphasis was on completion of work. There were several worksheet assignments given each day. Many of the students had homework. The teacher was very structured and strict in her discipline, behavior, and expectations of student work ethic. Although this classroom was well taught, and although the students participated in some

enjoyable activities, it was more "hard work" and less "fun work" for the students. The teacher difference must be considered as a possible influence on the attitude and achievement test scores because of student exposure to the two different teachers and methods of instruction.

An unexpected finding of the study was the apparent effects on student behavior. Both the principal researcher and the cooperating teacher noted marked differences in behavior of students in the experimental group and students in the control group. A substitute for the cooperating teacher could not understand why there was such a big difference between the two groups. She had a difficult time controlling the control group students while she had no trouble with the treatment group students. The cooperating teacher commented that the control group students were more responsive and better self-disciplined on the whole than the control group. She commented that the control group was rowdy and required frequent discipline action.

The finding that SALT is indeed effective in elementary school spelling instruction suggests that accelerative learning and teaching techniques should be considered as viable alternatives in educational planning and classroom practice. Implementation of SALT in the classroom appears to be advantageous to students. The use of SALT methods create a more positive classroom climate and that positive climate is conducive to learning. SALT should be considered as a significant

alternative to traditional teaching methods.

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